

Subject card

Subject name and code	Essentials of hydrogeology - lecture, PG_00091502						
Field of study	Water Management and Protection of Water Resources						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	undergraduate studies	Subject group			Obligatory subject group in the field of study Subject group related to scientific research in the field of study Subject group related to practical vocational preparation		
Mode of study	full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			2.0		
Learning profile	practical	Assessment form					
Conducting unit	Katedra Geofizyki -> Faculty of Oceanography and Geography						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Leszek Łęczyński				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		7.0		20.0	57
Subject objectives	Gain knowledge of the conditions for the formation of groundwater communities and the underground water cycle, as well as potential sources of pollution and ways to protect these waters. To analyse the quality of water resources. To plan and forecast the risks to groundwater and its resources.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GWOZWL3-W09] potential threats and sources of pollution of surface and groundwater resulting from the development of civilization, in particular strong anthropoppression	Knows and understands the potential risks and sources of groundwater pollution resulting from heavy anthropoppression.	[SW4] test/exam - oral or written
	[GWOZWL3-U06] assess the impact of planned investments on value and quality of water resources and propose options for solutions to protect and restore water resources, recognize their weaknesses and strengths as well as opportunities and threats	Knows and understands the processes and phenomena of the hydrosphere as a system of interrelated and interacting components.	[SU4] test/exam - oral or written
	[GWOZWL3-K03] systematic further education and professional development, updating and expand their knowledge and skills, understands the limitations of his own knowledge in the context of civilization progress and recognizes authorities in the professional and scientific environment	He/she knows the limitations of his/her knowledge and skills. He/she understands the need for continuous professional qualification in the value and protection of groundwater resources and the continuous need for personal development.	[SK4] test/exam - oral or written
Subject contents	Introduction of basic concepts of geology. Hydrogeological concepts. Genesis and classification of groundwater. Basic hydrogeological properties of rocks. Waters of the aeration zone. Waters of the saturation zone. Basic laws of groundwater movement. Chemism of groundwater. Mineral and medicinal waters. Hydrogeological studies and elaboration of their results. Legal issues		
Prerequisites and co-requisites	No		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	exam	51.0%	100.0%
Recommended reading	Basic literature	-	
	Supplementary literature	-	
	eResources addresses	Adresy na platformie eNauczenie:	
Example issues/ example questions/ tasks being completed	-		
Work placement	Not applicable		

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